

Mission Risk Reduction through Regulatory Change Management

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OBJECTIVE:

NASA's Principal Center for Regulatory Risk Analysis and Communication (RRAC PC) is responsible for proactively identifying and communicating significant regulatory change, and associated potential risk to the NASA programs and facilities. This presentation highlights the communication efforts, tools, and strategies utilized by the RRAC PC.

ABSTRACT:

NASA Headquarters Environmental Management Division supports NASA's mission to pioneer the future in space exploration, scientific discovery, and aeronautics research by integrating environmental considerations into programs and projects early-on, thereby proactively reducing NASA's exposure to institutional, programmatic and operational risk. As part of this effort, NASA established the Principal Center for Regulatory Risk Analysis and Communication (RRAC PC) as a resource for detecting, analyzing, and communicating environmental regulatory risks to the NASA stakeholder community.

The RRAC PC focuses on detecting emerging environmental regulations and other operational change drivers that may pose risks to NASA programs and facilities, and effectively communicating the potential risks. For example, regulatory change may restrict how and where certain activities or operations may be conducted. Regulatory change can also directly affect the ability to use certain materials by mandating a production phase-out or restricting usage applications of certain materials.

Regulatory change can result in significant adverse impacts to NASA programs and facilities due to NASA's stringent performance requirements for materials and components related to human-rated space vehicles. Even if a regulation does not directly affect NASA operations, U.S. and international regulations can pose program risks indirectly through requirements levied on manufacturers and vendors of components and materials. For example, manufacturers can change their formulations to comply with new regulatory requirements. Such changes can require time-consuming and costly re-qualification certification for use in human spaceflight programs.

The RRAC PC has implemented a system for proactively managing regulatory change to minimize potential adverse impacts to NASA programs and facilities. This presentation highlights the process utilized by the RRAC PC to communicate regulatory change and the associated potential risks within NASA, as well as the process for communicating and cooperating with other government agencies and industry partners, both domestic and international, to ensure mission success.



NASA PRINCIPAL CENTER FOR REGULATORY RISK ANALYSIS AND COMMUNICATION

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Topics

- **Principal Center Overview**
- **Regulations Can Drive Program Risk**
- **Regulatory Communications Process**
- **Examples of Current Regulatory Activities**

RRAC PC Overview

- **RRAC PC Goals**

- Proactively detect, analyze and communicate environmental regulatory risks to NASA Programs and Facilities
- Negotiate and participate in the mitigation of such risks, including facilitating communication with regulatory agencies on behalf of NASA Programs
- Provide centralized support to NASA HQ Environmental Management Division (EMD)

- **Leadership**

- RRAC PC Lead: Sharon Scroggins/MSFC EEOH (AS10)
 - ❖ *Support Contractor: CH2M HILL*
- RRAC PC HQ Sponsor: David Amidei/HQ EMD

RRAC PC Focus in Perspective

Risks posed by the Program to the environment

- Identified under NEPA through the Environmental Impact Statement (EIS) process prior to Program inception
- The EIS describes programmatic options and addresses environmental considerations associated with each, usually in a one-time effort

Risks posed to the Program by environmentally-related drivers

- On-going effort through the life of the program
- Risk to program grows with time due to changes in laws and regulations

Regulations Can Drive Program Risks

Changing regulations have the potential to affect program activities directly and indirectly

- **Can restrict certain activities or processes; for example:**

- Changes in how operations may be done
 - ❖ *High-efficiency spray equipment*
 - ❖ *Quantities of thinner allowed for coating application*
- Limitations on where or how operations can take place
 - ❖ *In spray booths rather than “in the field”*
 - ❖ *Require dipping or brushing instead of spraying*
- Changes to protective equipment requirements

- **Can affect availability and usage of materials; for example:**

- Production phase-out or restriction of usage applications
 - ❖ *ODSs, brominated flame retardants, and others*
- May require material replacement efforts
 - ❖ *Replacement costs; potential schedule impacts; potential performance variance*
- Formulation changes by vendors to critical materials and/or components
 - ❖ *Despite contractual notification clauses, can happen without notification*

Regulatory Communications Process

RRAC PC Regulatory Communication

- **Regulatory communication takes many forms:**
 - **Communicate regulatory change to NASA Community**
 - ❖ *Regulatory update presentations to management*
 - ❖ *Technical working group participation*
 - Constellation and Shuttle Program Working Groups
 - JANNAF Propulsion meetings
 - Interagency Working Groups
 - etc.
 - ❖ *Regulatory alerts and special reports*
 - Regulatory posture of specific materials
 - Operational impact analyses of specific regulations
 - etc.
 - ❖ *Biweekly regulatory summary*
 - Federal and State actions
 - Other significant developments and news
 - **Solicit feedback from NASA Programs and Facilities on potential impacts from emerging regulatory changes**
 - **Communicate potential issues to regulatory agencies**
 - ❖ *Lead and facilitate negotiations for exemptions and other considerations from EPA*
 - ❖ *Assist EPA and other agencies in rule development activities*